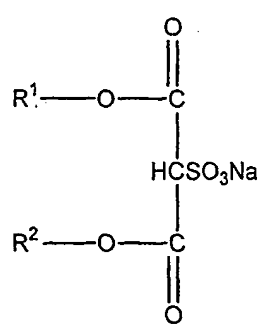
Claimed is:

1. A process for manufacturing a fine pore media comprising the steps of: forming a slurry comprising solvent, alumina and at least 0.01 wt % surfactant wherein said slurry has sufficiently low shear stress at high shear rates less than 12,000 dynes/cm^2 at a shear rate of 500/sec. such that it can enter organic foam with pore size equal to or less than 60 ppi;
impregnating an organic foam with said slurry to form an impregnated foam;
drying said impregnated foam to form a dry impregnated foam;
impregnating an organic foam with said slurry to form an impregnated foam;
drying said impregnated foam to form a dry impregnated foam;
heating said dry impregnated foam to remove said organic foam thereby forming a green ceramic; and
heating said green ceramic to a temperature sufficient to sinter said green ceramic.

2. The process for manufacturing a fine pore media of claim 1 wherein said surfactant comprises Formula I:



Formula I

wherein R^1 and R^2 independently represent an alkyl of 1-8 carbons with the proviso that the number of carbons in R^1 and R^2 combined does not exceed 15.

3. The process for manufacturing a fine pore media of claim 2 wherein wherein the number of carbons in R^1 and R^2 combined does not exceed 14.

4. The process for manufacturing a fine pore media of claim 3 wherein the number of carbons in R^1 and R^2 combined does not exceed 13.

5. The process for manufacturing a fine pore media of claim 1 wherein said slurry comprises no more than 1 wt% surfactant.

6. The process for manufacturing a fine pore media of claim 1 wherein said slurry

has a shear stress of less than 8000 dynes/cm^2 at a shear rate of 500/sec.

7. The process for manufacturing a fine pore media of claim 1 wherein said filter has a density of no more than 10% of the theoretical density for a ceramic material of the same size.

8. The process for manufacturing a fine pore media of claim 1 wherein said filter has a density of less than 10% of the theoretical density for a ceramic material of the same size and a compressive yield stress of at least 20 psi

9. The process for manufacturing a fine pore media of any of claims 1-8 wherein said alumina is selected from sintered alumina and phosphate bonded alumina.

10. A fine pore filter prepared by the method of any of claims 1-9.

11. The process of any of claims 1-9 wherein said foam is quenched foam.

12. A filter for filtering impurities from molten metal wherein said filter comprises ceramic and said filter has a density of less than 10% of the theoretical density for a ceramic material of the same size and a compressive yield stress of at least 20 psi.

13. The filter of any of claims 10 or 12 wherein said filter has a density of no more than 8% of the theoretical density for a ceramic material of the same size.

14. The filter of claim 13 wherein said filter has a density of no more than 6% of the theoretical density for a ceramic material of the same size.

15. The filter of any of claims 10 or 12 wherein said filter has a compressive yield stress of at least 40 psi.

16. The filter of claim 15 wherein said filter has a compressive yield stress of at least 60 psi.

17. The filter of claim 16 wherein said filter has a compressive yield stress of at least 80 psi.

18. A filter of any of claims 12-17 wherein said filter has a density of at least 12% of the theoretical density for a ceramic material of the same size and a compressive yield stress of at.least 90 psi.

19. A molten metal filtered by said filter of any of claims 10 or 12-18.

20. Aluminum filtered by said filter of claim 19.

21. A filter of any of claims 10 or 12-17 comprising a pressure drop of less than 3 in/water at an air flow velocity of 285 ft/min. in a 4 inch diameter circular area.

22. A sintered alumina filter of any of claims 10, 12-18 or 21 having dimensions of at least about 38.1 x 38.1 x 2.54 cm to no larger than about 76.2 x 76.2 x 7.62 cm.